

Title (en)

Assembly for making ceramic composite structures and method of using the same.

Title (de)

Anordnung zur Herstellung von keramischen Verbundkörpern und Verfahren zu deren Verwendung.

Title (fr)

Installation de fabrication de structures céramiques composites et son mode d'utilisation.

Publication

EP 0277902 A1 19880810 (EN)

Application

EP 88630009 A 19880112

Priority

US 310287 A 19870114

Abstract (en)

An assembly for the preparation of ceramic composite structures includes a segmented container (12) within which a permeable filler is retained and a parent metal body (20) is contacted with the bed (18) of permeable filler. The segmented container (12) is comprised of one or more segments made of a material, such as an Inconel alloy, which has a coefficient of thermal expansion which is significantly greater than that of the filler. The segments are arranged to define between or among them one or more expansion joints which are effective to accommodate circumferential thermal expansion of the segments to thereby inhibit or prevent volumetric expansion of the container (12). A method of forming ceramic composite structures includes heating the resulting assembly to melt and oxidize the parent metal, (20), e.g., aluminum, to form a polycrystalline material comprising an oxidation reaction product which grows through the mass of filler to embed it and thus form the composite structure.

IPC 1-7

C04B 35/65; **C04B 35/10**

IPC 8 full level

C04B 35/10 (2006.01); **B22F 3/12** (2006.01); **B28B 13/00** (2006.01); **C04B 35/622** (2006.01); **C04B 35/65** (2006.01); **C04B 35/653** (2006.01); **C04B 35/76** (2006.01); **C04B 35/80** (2006.01); **C22C 29/12** (2006.01)

CPC (source: EP KR US)

B22F 3/1208 (2013.01 - EP US); **C04B 35/00** (2013.01 - KR); **C04B 35/652** (2013.01 - EP US); **C22C 19/00** (2013.01 - EP US); **C22C 33/02** (2013.01 - EP US)

Citation (search report)

- [E] EP 0262075 A1 19880330 - LANXIDE TECHNOLOGY CO LTD [US]
- [AD] EP 0193292 A2 19860903 - LANXIDE CORP [US]

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0277902 A1 19880810; **EP 0277902 B1 19920805**; AT E79110 T1 19920815; AU 1002188 A 19880728; AU 603174 B2 19901108; BG 60549 B1 19950828; BG 82582 A 19931224; BR 8800110 A 19880823; CA 1308887 C 19921020; CN 88100084 A 19880831; CS 23488 A3 19921216; CZ 277742 B6 19930414; DD 285336 A5 19901212; DE 3873364 D1 19920910; DE 3873364 T2 19930225; DK 13188 A 19880715; DK 13188 D0 19880113; FI 880138 A0 19880113; FI 880138 A 19880715; FI 90058 B 19930915; FI 90058 C 19931227; HU 210664 B 19950628; HU T63127 A 19930728; IE 62741 B1 19950222; IE 880041 L 19880714; IL 85077 A0 19880630; IL 85077 A 19910816; IN 168503 B 19910413; JP 2546873 B2 19961023; JP S63201069 A 19880819; KR 880008962 A 19880913; MX 166352 B 19921231; NO 176793 B 19950220; NO 176793 C 19950531; NO 880097 D0 19880112; NO 880097 L 19880715; NZ 223093 A 19900828; PH 26347 A 19920429; PL 157107 B1 19920430; PL 270141 A1 19880929; PT 86541 A 19890130; PT 86541 B 19930831; RO 100575 B 19920109; RU 1809828 C 19930415; TR 24660 A 19920109; US 4832892 A 19890523; YU 3688 A 19900228; ZA 88202 B 19880630

DOCDB simple family (application)

EP 88630009 A 19880112; AT 88630009 T 19880112; AU 1002188 A 19880104; BG 8258288 A 19880111; BR 8800110 A 19880113; CA 556690 A 19880111; CN 88100084 A 19880812; CS 23488 A 19880113; DD 31221588 A 19880113; DE 3873364 T 19880112; DK 13188 A 19880113; FI 880138 A 19880113; HU 8488 A 19880111; IE 4188 A 19880108; IL 8507788 A 19880111; IN 27CA1988 A 19880113; JP 670888 A 19880114; KR 880000287 A 19880114; MX 1010988 A 19880114; NO 880097 A 19880112; NZ 22309388 A 19880106; PH 36341 A 19880111; PL 27014188 A 19880114; PT 8654188 A 19880113; RO 13123587 A 19871223; SU 4203974 A 19880113; TR 89687 A 19871229; US 310287 A 19870114; YU 3688 A 19880108; ZA 88202 A 19880113